

SUBSTITUTE SPECIFICATION

ATPS FOR CONTROLLING TRAIN USING DATA COMMUNICATON

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to an automatic train protection stop (ATPS) device. Particularly, the present invention relates to the ATPS having both the functions of an automatic train protection (ATP) and an automatic train stop (ATS) by adding a K-Balise, on the ground, which is capable of transmitting ground information using a small air-gap data communication and a ground information memory pack on a train.

2. Description of Related Art

Typically, a device transmitting ground information for an automatic train stop is called Balise. The Balise is a device for transmitting, using data communication, ground information such as ground operation conditions, distance and position of the beacon, and a target speed from a ground equipment to an on-board equipment.

The K-Balise adapted to the present invention as a part of the current ATP is a Balise integrating a beacon, a tag (Transponder or Loop Coil), card or terminal. Particularly, it includes a Euro Balise and is called as K-Balise in the present invention.

There have been many problems in the conventional railroad section such as bottleneck problem and safety accident caused by increase of the railroad capacitance and running speed. Thus, it is required to shorten the operation time, provide operation information, and secure the safety operation as an auxiliary function. When the conventional railroad is improved so as to be operated at high speed, it is required to develop an automatic train protection stop device capable of operating at over 200 Km/h.